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A Study of the Role of Chemicals and Viruses in Neoplastic Transformation of
Mouse and Hamster Respiratory Epithelial Cells. Contract #8

One theory of carcinogenesis suggests that spontaneous leukemias and sarcomas and those induced by irradiation and chemicals result from activation of an indigenous "latent" virus. Observations by other investigators have established the fact that C-type RNA viruses are associated with tumors of mesenchymal cells. In this study, the experimenters propose to extend these observations to mouse and hamster respiratory epithelial cells. To this end, they will examine the possibility that chemicals alone or in concert with C-type RNA viruses transform respiratory epithelial cells to produce, upon subinoculation in animals, tumors of squamous or anaplastic epithelial cells analogous to bronchogenic carcinomas of man. If it appears that chemicals alone transform cells, the possible emergence of indices that an RNA virus was indigenous in the epithelial cells will be studied. Specifically, this viral carcinogenesis study has two aims:

1. To produce neoplastic transformation of mouse respiratory epithelial cells in cell culture.
2. To test neoplastic transformation of hamster respiratory epithelium in organ culture.

Current Contract Level: \$53,125.

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